

**UNITED STATES DEPARTMENT OF COMMERCE****United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	T	ATTORNEY DOCKET NO.
09/121,017	07/22/98	IMAMURA		

023280 HM12/0618
DAVIDSON, DAVIDSON & KAPPEL, LLC
485 SEVENTH AVENUE, 14TH FLOOR
NEW YORK NY 10018

EXAMINER SAUNDERS, D.

ART UNIT 144	PAPER NUMBER 22
-----------------	--------------------

06/18/01

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

121,017

Applicant(s)

IMAMURA et al

Examiner

SAUNDERS

Group Art Unit

1642

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 3/8/01 & 4/5/01
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1, 3-6, 14 and 16-22 is/are pending in the application.
Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1, 3-6, 14 and 16-22 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

Art Unit: 1644

The amendments filed on 3/8/01 and 4/5/01 (Papers 20 and 21) have been entered; claims 1, 3-6, 14 and 16-22 are pending and under examination.

The following corrections have been entered in the previous Office Action (Paper 18):

At page 3, line 1, changed "16" to --6--.

At page 3, penultimate line, changed "6" to --5-6--.

These changes have been entered in red and initialed and dated by the examiner.

Applicant should likewise correct his copy.

Regarding the drawings, the examiner concurs that drawings with English text legends were filed on 11/20/98. The substitute drawings with Figures 5A-5B and 6A-6B have been approved by the examiner.

Claim 14 is objected to under 37 CFR 1.75 © as being in improper multiple dependent form because it fails to refer to other claims in the alternative only. Applicant must replace "and" with --or--.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant's response has overcome the previously stated rejection of claim 5 under 35 USC, 112 first paragraph.

Applicant's amendment has overcome the previously stated 102(b) rejection stated over Senoo et al.

The following 112 second paragraph rejection is maintained.

OK
st
amend

Art Unit: 1644

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

new
The term "greatly" is indefinite because it is a relative term. Applicant's response that those of skill would know that the term implies that the tertiary structure would not change greatly enough to incur a loss of activity is unconvincing. There is no requirement in the recited claim that activity be retained, let alone increased. See further comments by the examiner regarding protein activity in the 112, first paragraph rejections further below.

Applicant's urgings filed on 3/8/01 have been considered but are unconvincing.

Applicant's amendment has necessitated the following new grounds of rejection under 112, first paragraph.

Claims 1, 3-6, 14, 16-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amended claims contain new matter.

new
Independent claims 1, 16, 18 and 20, as well as dependent claims 4-6 recite "at least one covalently bonded sugar chain" and thus encompass embodiments with one or more than one added sugar chain. Independent claim 19 recites "plurality of covalently bonded sugar chains" and thus requires more than one added sugar chain. The examiner fails to find support in the

*Claim 9, 22
not included*

Art Unit: 1644

original disclosure for the embodiments of more than one. All recitations in the original disclosure recited "a sugar chain" in the singular. Applicant has thus improperly expanded claim scope.

All independent claims also contain new matter by merely claiming a heparin binding protein with the added sugar chain(s) without the qualification that the activity of the heparin binding protein has been increased over what it would have been without the added sugar chain(s). Note original claim 1 recited "functionalized", which was defined in the para. spanning pages 6-7 as "increasing the activity of a protein of interest". Dependent claim 22 is rejected on the same basis, because it merely rules out the case in which "the activity of the heparin binding protein is significantly decreased" but does not require that this activity be increased.

*OK by
amend*
Claim 20 contains new matter by claiming a "heparin binding protein" comprising a "peptide", since the original disclosure was directed to modifications of the heparin binding protein per se rather than to peptide fragments thereof.

~~Claims 20-21~~ are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

*OK
by
amend.*
Claim 20 is confusing as to whether the peptide of line 1 and the peptide of line 3 are the same or different.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1644

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to David Saunders at telephone number (703) 308-3976.

Saunders:mv

June 8, 2001

David A. Saunders
DAVID SAUNDERS
PRIMARY EXAMINER
ART UNIT 182-1644